

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : John Delta and Donald Bosic      Art Unit : 3624  
Serial No. : 09/841,661      Examiner : Akintola, Olabode  
Filed : April 24, 2001      Conf. No. : 6435  
Title : EXTENDED HOURS TRADE FILTERING

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Commissioner for Patents  
P.O. Box 1450  
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APPEAL BRIEF ON BEHALF OF JOHN DELTA AND DONALD BOSIC

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### **Real Party In Interest**

The real party in interest in the above application is The Nasdaq Stock Market, Inc., a corporation existing by virtue of laws of the State of Delaware.

### **Related Appeals and Interferences**

Appellants are not aware of any appeals or interferences related to the above-identified patent application.

### **Status of Claims**

This is an appeal from the decision of the Primary Examiner in an office action dated October 5, 2006, finally rejecting claims 1-35, all of the claims in the above application. Claims 36-41 were canceled.

Appellants filed a Notice of Appeal on December 21, 2006.

### **Status of Amendments**

All amendments have been entered.

### **Summary of Claimed Subject Matter**

#### Claim 1

One aspect of Appellants' invention is set out in claim 1 as a computer system executing a trade filtering process for identifying suspect trades. "Referring to FIG. 4, there is shown a processor 300 and memory 302 configured to: monitor 304 a trade price associated with each trade of a specific stock during a trading session; compare 306 the trade price of each trade of a specific stock to a known acceptable price for that specific stock to determine which trades are suspect trades; and prevent 308 the processing of the suspect trades." [Specification page 10, lines 13-17].

Inventive features of claim 1 include a trade monitoring process for monitoring a trade price associated with each trade of a specific stock during a trading session. "Trade filtering process 10 includes a trade monitoring process 21, which monitors the trade volume 18 and trade

price 20 of each trade 16 of a specific stock traded during a trading session. [Specification page 6, lines 4-6].

Inventive features of claim 1 also include a trade comparison process, responsive to the trade monitoring process, for comparing the trade price of each trade of a specific stock to a known acceptable price for that specific stock to identify which trades are suspect trades. "A trade comparison process 22 is responsive to trade monitoring process 21. As trade monitoring process 21 monitors the trade price 20 associated with each trade for a specific stock, this trade price 20 is provided to trade comparison process 22 so that a comparison can be made. Trade comparison process 22 compares the trade price 20 of trade 16 to a known acceptable price "K" 24 for that specific stock. This comparison can identify trades that are suspect trades." [Specification page 6, lines 9-14].

Inventive features of claim 1 also include a suspect trade filtering process, responsive to the trade comparison process, for preventing the processing of suspect trades. "Whenever trade comparison process 22 determines a trade is a suspect trade ("S") 28, suspect trade 28 is provided to suspect trade filtering process 30 for processing. Alternatively, any trade which trade comparison process 22 determines to be a non-suspect trade is provided to computerized trading system 14 for processing and posting.

Suspect trade filtering process 30, which is responsive to trade comparison process 22, prevents (until further analysis can be performed) the processing of those trades which trade comparison process 22 determined were suspect trades. While such suspect trades 28 are not immediately considered bad (or invalid) trades, further processing must be performed before it can be determined if these trades should be processed and posted by computerized trading system 14." [Specification page 6, lines 15-24].

#### Claim 20

Claim 20 claims another aspect of the invention. Claim 20 is directed to a method of preventing processing of suspect trades, the method executed in a computer system. This feature is supported as the analogous feature of claim 1 and "Suspect trade filtering process 30, which is responsive to trade comparison process 22, prevents (until further analysis can be performed) the processing of those trades which trade comparison process 22 determined were suspect trades.

While such suspect trades 28 are not immediately considered bad (or invalid) trades, further processing must be performed before it can be determined if these trades should be processed and posted by computerized trading system 14." [Specification page 6, lines 19-24].

Claim 20 includes the feature of monitoring a trade price associated with each trade of a specific stock during a trading session. This feature finds support as generally set out for claim 1.

Claim 20 also includes the feature of comparing in the computer system the trade price of each trade of a specific stock to a known acceptable price for that specific stock, with the acceptable price being a range of prices that span from a specific amount below to a specific amount above the last known good price, to determine which trades are suspect trades, which have trade prices that fall outside the acceptable range of prices. This feature finds support as generally set out for claim 1 and "Acceptable price determination process 32 includes a price acceptability window process 40 for determining the known acceptable price 24, where the known acceptable price 24 is actually an acceptable range of prices 42 that span from a specific amount ("x") below last known good price 36 to a specific amount ("x") above last known good price 36." [Specification page 7, lines 4-7].

Claim 20 also includes the feature of preventing processing of the suspect trades. This feature finds support as generally set out for claim 1. Claim 20 also includes the feature of determining a last known good price for a specific stock being traded. "The specific amount ("x") that acceptable range of prices 42 spans above and below last known good price 36 can be various values, such as: a fixed dollar amount; or a percentage (e.g., 15%) of the last known good price 36." [Specification page 7, lines 11-14].

Claim 20 also includes the feature of adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade. "Acceptable price determination process 32 includes a last known good price adjustment process 44 which adjusts the value of last known good price 36 for the specific stock being traded to be equal to the trade price of the last non-suspect trade. As stated above, if the stock has already been traded in the current trading session, the last known good price 36 is the value that the stock last traded at." [Specification page 7, lines 14-18].

### Claim 23

Another aspect of the invention is covered by claim 23. Claim 23 is directed to a method for preventing the processing of suspect trades. This feature finds support as generally set out for claim 1.

Claim 23 also includes the feature of monitoring a trade price associated with each trade of a specific stock during a trading session. This feature finds support as generally set out for claim 1.

Claim 23 also includes the feature of comparing the trade price of each trade of a specific stock to a known acceptable price for that specific stock to determine which trades are suspect trades. This feature finds support as generally set out for claim 1.

Claim 23 also includes the feature of preventing the processing of the suspect trades. This feature finds support as generally set out for claim 1.

### Claim 30

Claim 30 is directed to a computer program product residing on a computer readable medium having a plurality of instructions. "Referring to FIG. 3, a computer program product 200 resides on a computer readable medium 202 having a plurality of instructions 204 stored thereon which, when executed by processor 206, cause that processor 206 to monitor 208 a trade price associated with each trade of a specific stock during a trading session. Processor 206 compares 210 the trade price of each trade of a specific stock to a known acceptable price for that specific stock to determine which trades are suspect trades. Processor 206 prevents 212 the processing of the suspect trades." [Specification page 10, lines 3-9].

Claim 30 also includes the feature of instructions to monitor a trade price associated with each trade of a specific stock during a trading session. This feature finds support as generally set out for claim 1.

Claim 30 also includes the feature of instructions to compare the trade price of each trade of a specific stock to a known acceptable price for that specific stock to determine which trades are suspect trades. This feature finds support as generally set out for claim 1.

Claim 30 also includes the feature of instructions to prevent the processing of the suspect trades. This feature finds support as generally set out for claim 1.

### **Grounds of Rejection to be Reviewed on Appeal**

1. Claims 1-19 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention..
2. Claims 1-19 stand rejected under 35 U.S.C. §101 as directed to a non statutory subject matter.
3. Claims 1-4, 12, 23-24, 30-31 and 34 stand rejected under 35 U.S.C. 103(a), as being unpatentable over Vogel et al. (US Patent 6944599).
4. Claims 5-11, 13-18, 20, 22, 25-28, 32 and 35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel et al. (US Patent 6944599) in view of Sposito (US Patent Application 2001/0042033).

### **Argument**

#### Obviousness

"It is well established that the burden is on the PTO to establish a prima facie showing of obviousness, *In re Fritsch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (C.C.P.A., 1972)."

"It is well established that there must be some logical reason apparent from the evidence or record to justify combination or modification of references. *In re Regal*, 526 F.2d 1399 188, U.S.P.Q.2d 136 (C.C.P.A. 1975). In addition, even if all of the elements of claims are disclosed in various prior art references, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill in the art would have been prompted to combine the teachings of the references to arrive at the claimed invention. *Id.* Even if the cited references show the various elements suggested by the Examiner in order to support a conclusion that it would have been obvious to combine the cited references, the references must either expressly or impliedly suggest the claimed combination or the Examiner must present a convincing line of reasoning as to why one skilled in the art would have found the claimed invention obvious in light of the teachings of the references. *Ex Parte Clapp*, 227 U.S.P.Q.2d 972, 973 (Board. Pat. App. & Inf. 985)."

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Laskowski*, 10 U.S.P.Q. 2d 1397, 1398 (Fed. Cir. 1989).

"The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984).

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under Section 103, teachings of references can be combined only if there is some suggestion or incentive to do so. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984) (emphasis in original, footnotes omitted).

"The critical inquiry is whether 'there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.'" *Fromson v. Advance Offset Plate, Inc.*, 225 U.S.P.Q. 26, 31 (Fed. Cir. 1985).

**1. Claims 1-19 are definite under 35 U.S.C. 112, second paragraph, since the claims particularly point out the subject matter of what Appellants consider their invention.**

#### Claims 19

For the purposes of this appeal only, claims 1-19 may be treated as standing or falling together. Claim 1 is representative of this group.

Claim 1 recites: "A computer system executing a trade filtering process for identifying suspect trades, the computer system executing processes comprising:

a trade monitoring process \*\*\* ; a trade comparison process \*\*\* ; and a suspect trade filtering process \*\*\*.

Claim 1 is directed to a computer system executing certain computer executable processes of monitoring, comparing and filtering. As such, claim 1 is directed to a machine.

The examiner takes the position that the claims are indefinite because they fall into two different statutory classes. The examiner stated:

Claims 1-19 are not sufficiently precise due to the combining of two different statutory classes of invention in a single claim. The preamble the claim refers to a system, but the body of the claim discusses the specifics of a process (" trade monitoring..., trade comparison ., trade filtering..."). A claim is considered indefinite if it does not apprise those skilled in the art of its scope. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F. 2d 1200, 1217 (Fed. Cir. 1991).

The Examiner's characterization of claims 1-19, as combining two different statutory classes is incorrect, since the preamble of the claim is clearly directed to a machine, namely a computer system that executes computer processes.

The examiner relies on *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990) to support the examiner's conclusion that the claims are indefinite under 35 U.S.C. 112, second paragraph. In *Ex parte Lyell* the Board held that: "... Appellants' claim 2 is not sufficiently precise to provide competitors with an accurate determination of the "metes and bounds" of protection involved so that an evaluation of the possibility of infringement may be ascertained with a reasonable degree of certainty, as discussed by the court in *In re Hammack*, supra. (citations omitted)."<sup>1</sup>

Appellants' claims 1-19 are neither directed to two distinct classes of invention nor are the claims indefinite. Appellants' claim 1 is reproduced below:

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<sup>1</sup> Claim 2 from *Lyell* is reproduced below:

2. An automatic transmission tool in the form of a workstand and method for using same comprising:  
a support means,  
and [sic] internally splined sleeve affixed upright to said support means,  
a threaded adjustment bolt threadably engaged through a hole in the bottom of said support means and projecting upward through said support frame into said sleeve,  
and further comprising the steps of  
1. positioning the output end of an automatic transmission onto said upright sleeve,  
2. removing the internal components of said automatic transmission from the casing of said transmission,  
3. repairing and replacing said internal components back into said casing, and  
4. adjusting said internal components for fit and interference by means of adjusting said upwardly projecting adjustment bolt.



1. A computer system executing a trade filtering process for identifying suspect trades, the computer system executing processes comprising:
  - a trade monitoring process for monitoring a trade price associated with each trade of a specific stock during a trading session;
  - a trade comparison process, responsive to the trade monitoring process, for comparing the trade price of each trade of a specific stock to a known acceptable price for that specific stock to identify which trades are suspect trades; and
  - a suspect trade filtering process, responsive to the trade comparison process, for preventing the processing of suspect trades.

Neither in the preamble of claim 1 (A computer system executing a trade filtering process for identifying suspect trades, the computer system executing processes) nor in the body of claim 1 are found any limitations that are method or process claim features. That, Appellants chose to use the word "process" in the body of claim 1, does not make that claim directed to a process claim (or method claim), since no process steps are recited. Rather, Appellants have claimed executing processes on the computer system, which one of skill in the computer arts, would understand as computer routines to provide the recited functions for the claimed machine, i.e., computer.

The situation in *Lyell* is thus distinguishable from the present claims, because unlike *Lyell* here the claims are solely directed to a machine "a computer system," whereas in *Lyell* the claims were directed to both a machine, "[A]n automatic transmission tool in the form of a workstand" and to a "method for using same."

In *Lyell*, the body of the claims expressed both machine and method limitations and as the Board found there would be confusion for a competitor to understand what constituted an infringement.<sup>2</sup> However, no such confusion exists in the present claims 1-19, since those claims are only directed to a "computer system."

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<sup>2</sup> *Ex parte Lyell*, 17 USPQ2d 1548 at 1550-1551

[1] Appellants' independent claim 2, in combining two separate statutory classes of invention in a single claim, in our opinion, would raise serious questions for a manufacturer or seller of a tool like that claimed by appellant regarding infringement. Such a manufacturer or seller would have no indication at the time of making or selling a workstand of the structure set forth in Appellants' claim 2 whether they might later be sued for contributory infringement because a buyer/user of the workstand later performs the Appellants'

**2. Claims 1-19 are directed to statutory subject matter.**

The examiner rejected the claims under 35 U.S.C. 101 based on the theory that the claims were directed to neither a "process" nor a "machine," but rather embraced or overlapped two different statutory classes of invention set forth in 35 U.S.C. 101.

The examiner stated:

Applicant's claims mentioned above are intended to embrace or overlap two different statutory classes of invention as set forth in 35 U.S.C. §101. The claim begins by discussing a computer system (ex. Preamble of claims 1-19), the body of the claim discusses the specifics of a process ("trade monitoring..., trade comparison .., trade filtering...") (see rejection of claims under 35 U.S.C. §112, second paragraph, for specific details regarding this issue). "A claim of this type is precluded by express language of 35 U.S.C. §101 which is drafted so as to set forth statutory the statutory classes of invention in the alternative only", Ex parte Lyell (17USPQ2d 1548).

However, unlike the situation in *Lyell*, in which the preamble of Lyell's claim 2 recited an "automatic transmission tool in the form of a workstand and method for using same," (emphasis added) the preamble of Appellants' claim 1 only embraces a single statutory class, namely a machine, since claim 1 is only directed to a computer system. Appellants also note that the Board in *Lyell* did not consider the body of claim 2 in rendering its decision that Lyell's claim 2 was non-statutory. Unlike the situation in *Lyell's* claim 2, which expressly recites process steps, such recitations are missing in Appellants' claim 1, since the processes recited in claim 1 are not process limitations, but instead are functional limitations on the computer system.

Appellants therefore contend that the examiner has erred in construction of the claims where the examiner states that: "For examination purpose, the examiner will give these claims their broadest interpretation and treat them as process/method claims." These claims are neither process nor method claims but instead are machine claims. Therefore, the interpretation and treatment given to these claims must be as machine claims. In view of the examiner's

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claimed method of using the workstand. We therefore find that Appellants' claim 2 is not sufficiently precise to provide competitors with an accurate determination of the "metes and bounds" of protection involved so that an evaluation of the possibility of infringement may be ascertained with a reasonable degree of certainty, as discussed by the court in *In re Hammack, supra*. Accordingly, for this reason alone we would sustain the examiner's rejection of Appellants' independent claim 2 and of dependent claims 4, 7, 8 and 10 through 12 under 35 USC 112, second paragraph.

mischaracterization of the claims, the examiner must give the claims an interpretation that is reasonable.<sup>3</sup>

**3. Claims 1-4, 12, 23-24, 30-31 and 34 are  
patentable over Vogel et al. (US Patent 6944599).**

Claims 1, 2, 23, 24 and 30

For the purposes of this appeal only, claims 1, 2, 23, 24 and 30 stand or fall together. Claim 1 is representative of this group of claims.

Appellants' claim 1 is neither described nor suggested by Vogel. Claim 1 includes the features of ... a trade monitoring process ..., a trade comparison process ... for comparing the trade price of each trade of a specific stock to a known acceptable price for that specific stock to identify which trades are suspect trades and a suspect trade filtering process ... for preventing the processing of suspect trades.

In the rejection, the examiner states in part:

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Appellants contend that the examiner has not applied these guidelines to examination of the claims of the present application. At the outset, these guidelines require the examiner to determine the scope and content of the prior art. It is not clear to Appellants that the examiner has done any more than conducted a search. Next, the guidelines require the examiner to

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<sup>3</sup> The examiner ignores the guidance given by the Federal Circuit in *In re Morris* 127 F.3d 1048, 44 U.S.P.Q.2d 1023, 1027 (Fed. Cir. 1997). According to *Morris* the Office is entitled to construe claim terms using their "broadest reasonable meaning." The court provided guidance on what "reasonable" means:

Since it would be unreasonable for the PTO to ignore any interpretive guidance afforded by the applicant's written description, either phrasing connotes the same notion: as an initial matter, the PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification. (Emphasis supplied)

ascertain the differences between the prior art and the claims. Appellants contend that the examiner has not ascertained the differences between the prior art and the claims. Rather, the examiner has merely made terse citations to unrelated teachings in Vogel. These guidelines also require that the examiner "resolve the level of ordinary skill in this art." Appellants contend that not only has the examiner failed resolved the level of ordinary skill, Appellants do not see how the examiner is in a position to resolve the level of ordinary skill, since the examiner has neither taken testimony nor deposed any expert witnesses to resolve the level of ordinary skill in the pertinent art. Finally, these guidelines require the examiner to consider objective evidence present in the application indicating obviousness or non-obviousness of the subject matter of the claims. The examiner has not done either.

Rather, the examiner merely presents unsupported contentions that Vogel teaches: "... a suspect trade filtering process, responsive to the trade comparison process, for preventing the processing of the suspect trades (col. 3, lines 22-26); a suspect trade resolution process for determining if each the suspect trade is a bad trade (col. 4, lines 54-58)."

Appellants contend that Vogel is directed to a Network-based transaction facility and specifically concerns automated reporting information useful to the facility for a variety of reasons including record keeping, generating statistics, calculating revenue, etc. Vogel specifically is directed to an Internet-based retailer that generates a report listing the items sold during the day and the revenue generated by the sales. Vogel further describes that:

**For a network-based transaction facility, such as an Internet-based auction facility, and its users, information regarding sales is particularly important for setting fees and providing price guidance to users. Fees may be set based on volume or price of the items sold for individual users. The network-based auction facility may use sales information and statistics to determine how to set fees. The network-based auction facility may further use information generated on a periodic basis to guide sellers in setting prices at which to sell their items or buyers in bidding for items by indicating the average price or price range of the type of product being sold. Thus, there is a need for accurate reporting of information.**

Appellants' claim 1 on the other hand, is directed to different features, namely to a trade filtering process... associated with trades of a specific stock during a trading session. While Vogel teaches reporting of information, Vogel fails to describe or suggest ... a suspect trade

filtering process, responsive to the trade comparison process, for preventing the processing of suspect trades. Vogel does not describe this feature whether at Col. 3, lines 22-25 or elsewhere.

In the examiner's Response to Arguments The examiner reiterates that: "In col. 3, lines 22-25, Vogel teaches "irregular monitoring system 27 which performs algorithms to remove irregular and suspect data items". See also col. 2, lines 27-30 and lines 44-47."

However, that does not meet the thrust of Appellants' argument regarding Vogel. As Appellants argued in the prior replies, Vogel merely describes to remove irregular entries from a data representation. However, that teaching does not affect the processing of the transaction involved in the auction (i.e., preventing the processing of suspect trades) of the item in Vogel, but mere affects statistics on reporting of the auction of the item.

Vogel, at Col. 2, lines 27-30 discloses:

A method and system for monitoring and automatically reporting irregular activity on a network-based transaction facility are described. In the following description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be evident, however, to one skilled in the art that the present invention may be practiced without these specific details." Vogel at Col. 2, lines 44-47 discloses: "The term "suspect" shall be taken to indicate requiring further investigation or scrutiny. The term "irregular" shall be taken to indicate a derivation from a norm or an exceeding of boundaries or a range.

At Col. 3, lines 22-25, Vogel discusses:

Database engine server 22 includes an irregular activity monitoring system 27 which performs algorithms to remove irregular and suspect data items from data representations, as described below with reference to FIGS. 4-8.

However, neither in those cited passages nor elsewhere does Vogel teach: "a suspect trade filtering process, responsive to the trade comparison process, for preventing the processing of suspect trades." Vogel merely at best teaches to remove consummated suspect trades from a data representation of such trades. However, Vogel describes a data representation as: "If the end of the set has been reached, the system proceeds to processing block 507 where a report or other data representation is generated where the data representation only includes items having an irregular flag value of 0." [Vogel Col. 6, line 23-28].

Rather, Vogel clearly teaches away from this feature. For example, at Col 5, lines 59-65, Vogel describes:

When irregular activity has been found, an email may be sent to the seller and/or bidder at an address associated with the user identifier of the seller and/or bidder. The seller and/or bidder may further be banned from participation on the auction site by using the pointer linking to the user table to update a "irregular\_user" or similar field in the user record of the seller and/or bidder.

Vogel also discloses that: "An auction site 10 may charge sellers fees based on the selling price of an item. Thus, the auction site may use the formula for determining fees to determine a threshold fee for monitoring irregular activity." [Vogel Col. 5, Lines 1-5] Vogel also discloses that: "The threshold values may be listed in U.S. dollars for uniformity. Although the transaction is completed in Japanese yen, the threshold value will be listed in dollars and the highest bid will be converted from yen to dollars to compare whether the threshold value has been exceeded. Thus, a transaction completed in Japanese yen won't be limited to the threshold set for transactions in U.S. dollars and transactions in U.S. dollars won't be limited to thresholds set for Japanese yen." [Vogel Col. 5, lines 21-29].

It is clear therefore that Vogel does not describe and indeed would teach away from preventing processing of the trade, as recited in claim 1, since there is no motivation, e.g., an economic interest or any technical need to prevent the trade.

#### Claims 3, 4 and 31

Each of claims 3, 4 and 31 distinguish over Vogel. Claim 3 requires "a known price determination process for determining a last known good price for the specific stock being traded," whereas claim 4 requires: "a price acceptability window process for determining the known acceptable price, wherein the known acceptable price is an acceptable range of prices that span from a specific amount below the last known good price to a specific amount above the last known good price, with trades that have trade prices that do not fall within the acceptable range of prices being considered suspect trades." Claim 31 recites analogous features as claim 4.

Vogel on the other hand teaches: "If the category is computers, for example, the category may be assigned an irregular activity threshold of \$15,000 or another amount that would indicate that the item or the bid is irregular (or outside the normal range)." [Vogel col. 4, lines 34-37].

Vogel does not suggest much less describe: "a known price determination process for determining a last known good price for the specific stock being traded" as in claim 3 or "...the known acceptable price is an acceptable range of prices that span from a specific amount below

the last known good price to a specific amount above the last known good price..." as in claim 4. Rather, Vogel merely sets irregular activity thresholds or an amount that indicates that the price is out of a range. However, each of claims 3 and 4 require determining a last known good price." Thus, by requiring determining a last known good price, what is set is a variable price (that is, a price that is a function of the "last good price") is used in setting the price for what would be considered outside of the acceptable trades. This is not suggested by a static threshold or another amount that would indicate that the item or the bid is irregular (or outside the normal range), as taught by Vogel.

In the examiner's Response to arguments, the examiner states that: "the examiner interprets the term "irregular" as defined in col. 2, lines 45-47 to read on the "price acceptability window..." and "acceptable range of price...." Again, however the interpretation of "irregular" does not meet the claim language of "a last known good price for the specific stock being traded,"

#### Claims 12 and 34

For the purposes of this appeal only, claims 12 and 34 stand or fall together. Claim 12 is representative of this group of claims.

Claim 12, limits claim 3, and requires ... a suspect trade resolution process for determining if each suspect trade is a bad trade.

The examiner contends with respect to claim 12 that Vogel teaches: "a suspect trade resolution process for determining if each the suspect trade is a bad trade (col. 4, lines 54-58)."

Appellants disagree. Vogel teaches at the cited passage: "The irregular flag may be implemented so that the irregular flag may be later changed back to 0, after further investigation. In another embodiment, the irregular flag may be implemented so that it may not be changed back to 0 once it has been changed to 1."

Appellants' claim 12 however is directed to the "trade" not the item, as disclosed by Vogel. So while Vogel teaches: "Database 23 includes an item table 40, which contains a record

for each item being auctioned on the auction facility 10.”<sup>4</sup>, nowhere does Vogel teach “a suspect trade resolution process for determining if each suspect trade is a bad trade.”

**4. Claims 5-11, 13-18, 20, 22, 25-28, 32 and 35  
are patentable over the combination of Vogel et  
al. (US Patent 6944599) and Sposito (US Patent  
Application 2001/0042033).**

Claims 5-8

Claims 5-8 further distinguish since Vogel neither describes nor suggests a last known good price adjustment process for adjusting the last known good price of the specific stock being traded based on any of the criteria as specified in these claims.

For instance, claim 5 requires ... a last known good price adjustment process for adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade. Vogel merely sets either an irregular activity threshold or another amount that would indicate that the item or the bid is irregular e.g., or outside the normal range). However, nowhere does Vogel describe the threshold or normal range as related to or as in claim 5, equal to the trade price of the last non-suspect trade.

Claim 6, which requires that ... the specific amount above the last known good price and the specific amount below the last known good price are fixed dollar amounts, claim 7, which requires ... the specific amount above the last known good price and the specific amount below the last known good price are a percentage of the trade price associated with each trade or as in claim 7 wherein the percentage of said last known good price is 15% are not suggested by Vogel, at least because Vogel does not suggest the last known good price.

In the examiner's Response to Arguments the examiner contends: “With regards to claims 5, 20 and 32, applicant argued that Sposito fails to teach ‘a last known good price adjustment process’ Examiner disagrees. Examiner interprets ‘updating the associated last sales price...’ in sections [0023] and [0030] in Sposito to read on this limitation. Appellants contend that Sposito's associated last sale price does not meet the limitation of “a last known good price

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<sup>4</sup> Vogel Col. 3, lines 33-35.



adjustment process for adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade.”

#### Claims 9-11

Claim 9 and claims 10 and 11, which depend from claim 9, distinguish over Vogel, since Vogel neither describes nor suggests a last known good price initiation process for adjusting the last known good price of the specific stock being traded to be equal to a reference value whenever the stock is being traded for the first time in the trading session, as in claim 9 or “the reference value is the trade price of the specific stock being traded.”, as in claim 10 or ... the reference value is a previous day’s closing price.”, as in claim 11.

#### Claims 13 and 15-19

For the purposes of this appeal only, claims 13 and 15-19 stand or fall together. Claim 13 is representative of this group of claims.

Vogel clearly does not suggest claim 13, which requires that the suspect trade resolution process includes a non-suspect price determination process ... a suspect trade acceptability window process ... and a last known good price adjustment process for adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade. Vogel does not discuss any adjustments to the “irregular activity threshold” or “the normal range.”

#### Claim 20

Claim 20 is directed to a method of preventing processing of suspect trades... comparing ... the trade price of each trade of a specific stock to a known acceptable price for that specific stock, with the acceptable price being a range of prices that span from a specific amount below to a specific amount above the last known good price, to determine which trades are suspect trades, which have trade prices that fall outside the acceptable range of prices, preventing processing of the suspect trades... adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade.

Appellants contend that no combination of Vogel with Sposito describes or suggests this feature.

Vogel only teaches to determine if the price based value is greater than a predetermined price based value, Vogel does not teach determining if the price of the trade falls outside of a window price based value and Sposito only teaches:

The result is subtracted from the last sale price, giving the adjustment factor. If the adjustment factor is greater than zero, then the process creates a new sell/stop by subtracting the adjustment factor from the last sale price. If the adjustment factor is less than, or equal to, zero, the process does nothing. If a new sell/stop number is created, the process will inform the owner of the revised sell/stop number.

Hence neither reference nor any combination of these references suggests, e.g., to determine which trades are suspect trades, which have trade prices that fall outside the acceptable range of prices, preventing processing of the suspect trades...

#### Claim 21

Claim 21, which calls for "a suspect trade resolution process for determining if each said suspect trade is a bad trade.", is allowable over Vogel, for the reasons discussed in conjunction with claim 12, above. Moreover, Sposito is not seen as curing any of the deficiencies in Vogel.

The examiner contends that: "Re claim 5-7, 9-11,13-17, 20, 22, 25-28, 32 and 35: See claims 1-4 analyses discussed above. Furthermore Vogel teaches the step of determining if each the suspect trade is a bad trade (col. 4, lines 54-58) ..."

The examiner does not appear to rely on Sposito for any teachings pertaining to this claim, rather contending that the claim was taught by Vogel. Nevertheless, Appellants contend that no combination of Vogel with Sposito teaches the feature of claim 21.

#### Claim 22

Claim 22 limits the method of claim 21 and recites features of the suspect trade resolution process. According to claim 22, the suspect trade resolution process includes "a suspect trade repository process ...; a non-suspect price determination process ...; a suspect trade acceptability window process ...; and a last known good price adjustment process for adjusting said last known good price of said specific stock being traded to be equal to said trade price of the last non-suspect trade.

The examiner acknowledges that Vogel does not explicitly teach "a last known good price adjustment process for adjusting said last known good price of said specific stock being traded to be equal to said trade price of the last non-suspect trade.", and relies on Sposito for this teaching. Specifically the examiner states:

However, Sposito teaches the steps wherein the acceptable price determination process includes: a last known good price adjustment process for adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade (section [0030]); ..."

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Vogel to include the steps disclosed above as taught by Sposito so that acceptable trade prices can be automatically adjusted and updated without any need for human input thereby creating a new range or boundaries of acceptable trade prices for items as the trade progresses.

Appellants disagree. According to Sposito at the cited passage, Sposito teaches to compute new "sell/stop price." However, this is not at all related to "a last known good price adjustment process for adjusting said last known good price of said specific stock being traded to be equal to said trade price of the last non-suspect trade," but is merely a stop price at which point a trade will not take place. The stop price however is neither the last known good price of the specific stock nor the trade price of the last non-suspect trade, but rather is merely a price that is: "the price at which he wishes to sell his security.", that is modified based on "the variable points," chosen by the owner of the security "how many points below the current price at which he wishes to sell the security."<sup>5</sup>

Accordingly since neither reference teaches the claimed feature and the examiner has not provided any argument as to how either reference could be modified to teach the claimed feature, the combination fails to suggest the claimed invention as set forth in this claim.

The examiner also argues that it is suggested to modify Vogel with Sposito "so that acceptable trade prices can be automatically adjusted and updated without any need for human input thereby creating a new range or boundaries of acceptable trade prices for items as the trade progresses." However, with respect to Vogel this would not be suggested, since Vogel is concerned with determining if an item exceeds a threshold price and providing a range or boundaries of acceptable trade prices would not assist in the purpose to remove from reports

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<sup>5</sup> Sposito paragraph 30.

those items that have unacceptable prices. On the other hand, with respect to Sposito, the examiner has not provided any motivation as to why the sell/stop price taught by Sposito would benefit from the reporting mechanism of Vogel.

#### Claims 25 and 27

For the purposes of this appeal only, claims 25 and 27 stand or fall together. Claim 25 is representative of this group of claims.

Claim 25, which limits claim 24 and includes "... determining a last known good price for the specific stock being traded; ... and adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade.", is not taught by any combination of Vogel and Sposito, for reasons discussed in claim 22.

#### Claim 26

Claim 26 recites that: "adjusting the last known good price of the specific stock being traded to be equal to a reference value whenever the stock is being traded for the first time in the trading session," is not disclosed by the cited references. The examiner acknowledges that Vogel does not teach this and relies on Sposito, specifically "a last known good price initiation process for adjusting the last known good price of the specific stock being traded to be equal to a reference value whenever the stock is being traded for the first time in the trading session (section [0023])."

Sposito teaches:

[0023] In accordance with another aspect of the present invention, a computer readable medium containing instructions for controlling a computer system to perform a method for monitoring and modifying securities having an associated purchase price and an associated last sale price, the method including the steps of setting variable points, setting a time interval, updating the associated last sale price after the time interval, adding the variable points to the associated purchase price, the addition rendering a result, subtracting the result from the associated last sale price, the subtraction rendering an adjustment factor, and creating a sell/stop price if the adjustment factor is greater than zero.

However, these teachings are directed to creating a sell/stop price based on the adjustment factor, and does not suggest: "adjusting the last known good price of the specific

stock being traded to be equal to a reference value whenever the stock is being traded for the first time in the trading session.”

#### Claim 28

Claim 28 limits claim 27 and is directed to features for determining if each suspect trade is a bad trade. Claim 28 includes the features of storing the trade price of the suspect trade, determining the trade price of at least a first non-suspect trade of the specific stock to occur after the suspect trade and determining a suspect acceptability price range ... “the suspect trade is considered a non-suspect trade if the trade price of the at least a first non-suspect trade falls within the suspect acceptability price range ... .”

The combination of Vogel with Sposito fails to suggest at least these features. The examiner argues that Vogel teaches: “a non-suspect price determination process for determining the trade price of at least a first non-suspect trade of the specific item to occur after the suspect trade (col. 5, lines 38-67; col. 7, lines 1-9; Figs. 4-8).”

Appellants disagree. Vogel does not teach these features, but rather teaches:

...the irregular activity monitoring system 27 checks to see if a price-based value of Item (n) of a set of items has a value greater than a predetermined value. As discussed above, the set of items may be items from the same category which had transactions established, by the ending of an auction, for example, at the same time. The predetermined value would depend on which price-based value is being examined, the currency, the geographic area, the category of the item or any other parameter that may indicate different threshold values to establish irregular activity.

Thus, rather than teaching the claim limitation, Vogel teaches to compare to “a set of items” not to “trades” for the individual security, whereas at Col. 7, lines 1-9 Vogel merely discusses the irregular\_item flag.

#### Claim 29

Claim 29 further distinguishes over the combination of references, since no combination of these references suggests the features of ... monitoring a trade volume associated with each trade, examining the trade volume and trade price of each trade and discarding trades whose trade volume is negative, whose trade volume is zero, whose trade price is negative, and whose

trade price is zero. The examiner admits that no combination of these references suggest these features and thus relies on official notice. Specifically the examiner states:

Re claims 19, 29 and 33: Vogel and Sposito do not explicitly teach a validity filter process for monitoring and examining a trade volume and a trade price wherein the validity filter process discards trades whose the trade volume is negative, whose the trade volume is zero, whose the trade price is negative, and whose the trade price is zero.

Official notice is hereby taken that it is old and well known in the electronic trading systems to remove trades whose trade volume and trade price do not meet certain conditions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the aforementioned steps to remove trades that are not desirable for the trading activity thereby making the system more efficient.

Appellants had challenged the examiner's contention that it is well known to "... monitoring a trade volume associated with each trade, examining the trade volume and trade price of each trade and discarding trades whose trade volume is negative, whose trade volume is zero, whose trade price is negative, and whose trade price is zero." The examiner has not furnished any proof of this administrative notice.

Moreover, assuming *arguendo* that it is well known to "to remove trades whose trade volume and trade price do not meet certain conditions," the examiner has not provided any reasonable basis why the combination of Vogel and Sposito would benefit from that teaching.

Recall that Vogel, the base reference, deals with items not trades, and the items as disclosed by Vogel do not possess volumes. While Vogel mentions that: "Fees may be set based on volume or price of the items sold for individual users.", Vogel does not track volume of items in the auction and does not use volume as a criteria for classifying items as irregular. Therefore, combination of official notice with Vogel would not appear to be obvious to one of ordinary skill in the art, since "to remove trades that are not desirable for the trading activity" would not make the system of the combination of Vogel with official notice "more efficient."

Sposito, on the other hand, deals with a sell/stop order and already has volume specified by the user and any combination of office notice with Sposito would serve no further purpose at least because Sposito is not specifically directed to filtering of trades or filtering of trade data as in Vogel reporting mechanism.

Accordingly, Appellants contend that it is not suggested to combine official notice with either Vogel or Sposito or the combination of Vogel and Sposito.

Claim 32

Claim 32, which limits claim 30 and requires instructions to "adjust the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade," is allowable for reasons analogous to those in claim 22.

Claim 33

Claim 33, which limits claim 30 and recites instructions to ... monitor a trade volume associated with each trade and examine the trade volume and the trade price of each the trade to discard those trades whose trade volume is negative, whose trade volume is zero, whose trade price is negative, and whose trade price is zero," is not taught by any combination of Vogel and Sposito, for reasons discussed in claim 22.

Claim 35

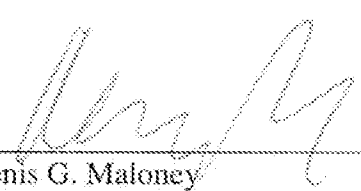
Claim 35, which limits claim 30 and features particular instructions to determine a bad trade, is allowable for reasons analogous to those in claim 13.

**Conclusion**

Appellants submit, therefore, that Claims 1-35 are allowable over the cited art, are directed to statutory subject matter and are definite. Therefore, the Examiner erred in rejecting Appellants' claims and should be reversed.

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### **Appendix of Claims**

1. A computer system executing a trade filtering process for identifying suspect trades, the computer system executing processes comprising:

a trade monitoring process for monitoring a trade price associated with each trade of a specific stock during a trading session;

a trade comparison process, responsive to the trade monitoring process, for comparing the trade price of each trade of a specific stock to a known acceptable price for that specific stock to identify which trades are suspect trades; and

a suspect trade filtering process, responsive to the trade comparison process, for preventing the processing of suspect trades.

2. The computer system of claim 1 further comprising an acceptable price determination process for determining the value of the known acceptable price.

3. The computer system of claim 2 wherein the acceptable price determination process includes:

a known price determination process for determining a last known good price for the specific stock being traded.

4. The computer system of claim 3 wherein the acceptable price determination process includes:

a price acceptability window process for determining the known acceptable price, wherein the known acceptable price is an acceptable range of prices that span from a specific amount below the last known good price to a specific amount above the last known good price, with trades that have trade prices that do not fall within the acceptable range of prices being considered suspect trades.

5. The computer system of claim 4 wherein said acceptable price determination process includes:



a last known good price adjustment process for adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade.

6. The computer system of claim 4 wherein the specific amount above the last known good price and the specific amount below the last known good price are fixed dollar amounts.

7. The computer system of claim 4 wherein the specific amount above the last known good price and the specific amount below the last known good price are a percentage of the trade price associated with each trade.

8. The computer system of claim 7 wherein the percentage of said last known good price is 15%.

9. The computer system of claim 3 further comprising a last known good price initiation process for adjusting the last known good price of the specific stock being traded to be equal to a reference value whenever the stock is being traded for the first time in the trading session.

10. The computer system of claim 9 wherein the reference value is the trade price of the specific stock being traded.

11. The computer system of claim 9 wherein the reference value is a previous day's closing price.

12. The computer system of claim 3 further comprising a suspect trade resolution process for determining if each suspect trade is a bad trade.

13. The computer system of claim 12 wherein the suspect trade resolution process includes:

a suspect trade repository process for storing the trade price of said suspect trade;

a non-suspect price determination process for determining the trade price of at least a first non-suspect trade of the specific stock to occur after the suspect trade;

a suspect trade acceptability window process for determining a suspect acceptability price range, wherein the suspect acceptability price range spans from a specific amount below the trade price of the suspect trade to a specific amount above the trade price of the suspect trade, wherein the suspect trade is considered a non-suspect trade if the trade price of the at least a first non-suspect trade falls within the suspect acceptability price range; and

a last known good price adjustment process for adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade.

14. The computer system of claim 13 wherein the at least a first non-suspect trade is one trade.

15. The computer system of claim 13 wherein the at least a first non-suspect trade is three consecutive trades.

16. The computer system of claim 13 wherein the specific amount above said trade price of the suspect trade and said specific amount below said trade price of the suspect trade are fixed dollar amounts.

17. The computer system of claim 13 wherein the specific amount above the trade price of the suspect trade and the specific amount below the trade price of the suspect trade are a percentage of the trade price of the suspect trade.

18. The computer system of claim 17 wherein said percentage of the trade price of the suspect trade is 5%.

19. The computer system of claim 1 wherein the trade monitoring process monitors a trade volume associated with each trade, the trade filtering process further comprising:

a validity filter process for examining the trade volume and the trade price of each the trade, and for discarding trades whose trade volume is negative, whose trade volume is zero, whose trade price is negative, and whose trade price is zero.

20. A method of preventing processing of suspect trades, the method executed in a computer system and the method comprising:

- monitoring a trade price associated with each trade of a specific stock during a trading session;

- comparing in the computer system the trade price of each trade of a specific stock to a known acceptable price for that specific stock, with the acceptable price being a range of prices that span from a specific amount below to a specific amount above the last known good price, to determine which trades are suspect trades, which have trade prices that fall outside the acceptable range of prices;

- preventing processing of the suspect trades;

- determining a last known good price for a specific stock being traded; and

- adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade.

21. The method of claim 20 further comprising a suspect trade resolution process for determining if each said suspect trade is a bad trade.

22. The method of claim 21 wherein said suspect trade resolution process includes:

- a suspect trade repository process for storing said trade price of said suspect trade;

- a non-suspect price determination process for determining the trade price of at least a first non-suspect trade of the specific stock to occur after said suspect trade;

- a suspect trade acceptability window process for determining a suspect acceptability price range, wherein said suspect acceptability price range spans from a specific amount below said trade price of said suspect trade to a specific amount above said trade price of said suspect trade, wherein said suspect trade is considered a non-suspect trade if the trade price of said at least a first non-suspect trade falls within said suspect acceptability price range; and

a last known good price adjustment process for adjusting said last known good price of said specific stock being traded to be equal to said trade price of the last non-suspect trade.

23. A method for preventing the processing of suspect trades, the method comprising: monitoring a trade price associated with each trade of a specific stock during a trading session;

comparing the trade price of each trade of a specific stock to a known acceptable price for that specific stock to determine which trades are suspect trades; and preventing the processing of the suspect trades.

24. The trade filtering method of claim 23 further comprising determining the value of the known acceptable price.

25. The trade filtering method of claim 24 wherein determining the value of the known acceptable price includes:

determining a last known good price for the specific stock being traded;  
determining the known acceptable price, wherein the known acceptable price is an acceptable range of prices which span from a specific amount below the last known good price to a amount above the last known good price, with those trades which have trade prices that do not fall within the acceptable range of prices being considered suspect trades; and  
adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade.

26. The trade filtering method of claim 25 further comprising adjusting the last known good price of the specific stock being traded to be equal to a reference value whenever the stock is being traded for the first time in the trading session.

27. The trade filtering method of claim 25 further comprising determining if each suspect trade is a bad trade.

28. The trade filtering method of claim 27 wherein determining if each suspect trade is a bad trade includes:

storing the trade price of the suspect trade;

determining the trade price of at least a first non-suspect trade of the specific stock to occur after the suspect trade;

determining a suspect acceptability price range, wherein the suspect acceptability price range spans from a specific amount below the trade price of the suspect trade to a specific amount above the trade price of the suspect trade, wherein the suspect trade is considered a non-suspect trade if the trade price of the at least a first non-suspect trade falls within the suspect acceptability price range; and

adjusting the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade.

29. The trade filtering method of claim 23 further comprising:

monitoring a trade volume associated with each trade;

examining the trade volume and trade price of each trade; and

discarding trades whose trade volume is negative, whose trade volume is zero, whose trade price is negative, and whose trade price is zero.

30. A computer program product residing on a computer readable medium having a plurality of instructions stored thereon which, when executed by the processor, cause that processor to:

monitor a trade price associated with each trade of a specific stock during a trading session;

compare the trade price of each trade of a specific stock to a known acceptable price for that specific stock to determine which trades are suspect trades; and

prevent the processing of the suspect trades.

31. The computer program product of claim 30 further comprising instructions to:

determine an acceptable range of prices that span from a specific amount below the last known good price to a specific amount above the last known good price, with trades that have trade prices that do not fall within the acceptable range of prices being considered suspect trades.

32. The computer program product of claim 30 further comprising instructions to:  
adjust the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade.

33. The computer program product of claim 30 further comprising instructions to:  
monitor a trade volume associated with each trade; and  
examine the trade volume and the trade price of each the trade to discard those trades whose trade volume is negative, whose trade volume is zero, whose trade price is negative, and whose trade price is zero.

34. The computer program product of claim 30 further comprising instructions to:  
determine if each suspect trade is a bad trade.

35. The computer program product of claim 30 wherein instructions to determine a bad trade, further comprises instructions to:

determine the trade price of a first non-suspect trade of the specific stock to occur after the suspect trade;

determine a suspect acceptability price range that spans from a specific amount below the trade price of the suspect trade to a specific amount above the trade price of the suspect trade, with the suspect trade being a non-suspect trade if the trade price of the first non-suspect trade falls within the suspect acceptability price range; and

adjust the last known good price of the specific stock being traded to be equal to the trade price of the last non-suspect trade.

Claims 36-41 are canceled

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### **Evidence Appendix**

**NONE**

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### **Related Proceedings Appendix**

**NONE**